

Daily Dose of Aptitude-27-06-2019

1. In how many ways the letters of the word 'MINIMUM' be arranged taking all the letters?

- A) 420
- B) 840
- C) 5040
- D) 720

Answer: A) 420

Explanation:

MINIMUM contains 7 letters, so total 7! ways. But it contains 2 I's and 3 M's so divide by 2! And 3!

So ways $7!/(2! * 3!) = 7*6*5*4*3*2*1 / 2*1*3*2*1 = 420$

2. A dishonest merchant sells his grocery using weights 15% less than the true weights and makes a profit of 20%. Find his total gain percentage.

- A) 37.50%
- B) 41.17%
- C) 42.50%
- D) 40.17%

Answer: B) 41.17%

Explanation: Let us consider 1 kg of grocery bag. Its actual weight is 85% of 1000 gm = 850 gm.

Let the cost price of each gram be Re. 1. Then the CP of each bag = Rs. 850.

SP of 1 kg of bag = 120% of the true CP

Therefore, $SP = 120/100 * 1000 = \text{Rs. } 1200$

Gain = $1200 - 850 = 350$

Hence Gain % = $350/850 * 100 = 41.17\%$

3. In an examination, it is required to get 296 marks out of aggregate marks to pass. A student gets 222 marks and is declared failed by 10% marks. What are the maximum aggregate marks as student can get?

- A) 830
- B) 810
- C) 780
- D) 740

Ans: D) 740

Sol: Let the maximum aggregate marks be x.

According to the question, $10\% \text{ of } x = 296 - 222$

$x/10 = 74$

$x = 74 \times 10 = 740$

4. A milk vendor has 2 cans of milk .The first contains 25% water and the rest milk. The second contains 50% water. How much milk should he mix from each of the container so as to get 12 litres of milk such that the ratio of water to milk is 3:5?

A)6 litres

B)1 litres

C)8 litres

D)7 litres

Ans: A)6 litres

Milk in 1st can = $\frac{3}{4}$

Milk in IInd can = $\frac{1}{2}$

Milk in Resultant mixture = $\frac{5}{8}$

So,By the rule of allegation,

$$\frac{3}{2}$$

$$\frac{1}{2}$$

$$\frac{5}{8}$$

$$\frac{5}{8} - \frac{1}{2} = 1$$

$$\frac{3}{2} - \frac{5}{8} = 1$$

$$1 + 1 = 12$$

$$2 = 12, 1 = 6 \text{ liter}$$

5. A, B and C enter into a partnership with investment of Rs. 4500, Rs. 3500 and Rs. 5500 respectively. After a year, profit is Rs. 405. What is B's share in the profit?

A) Rs. 200

B) Rs. 105

C) Rs. 250

D) Rs. 151

Ans: B) Rs. 105

Sol: Ratio of profit of A, B, and C.

$$4500 : 3500 : 5500$$

$$9:7:11$$

$$\Rightarrow 7x+9x+11x = 405$$

$$27x = 405$$

$$\text{So, } x=15$$

$$\text{B's share} = 7x = 7 \times 15 = \text{Rs. } 105$$

6. A man takes twice long to row a distance against the stream as to row the same distance in favour of the stream the ratio of the speed of the boat in still water is ?

A)1:3

B) 3:1

C) 5:6

D)6:5

Ans: B) 3:1

Sol: Let man's upstream be x kmph . then . his rate downstream $= 3x$ km/hr

(Speed in still water) : (Speed of stream) = $(2x+x/2) : (2x-x/2) = 3x/2 : x/2$

$\Rightarrow 3:1$

7. A person E starts the work 'X' and leave after 12 days, then B and C together complete the remaining work in 8 days. What is the ratio of number of days taken by A and E together to complete the work 'X' to the number of days taken by D, B and C together to complete the both work 'X' and 'Y' .

A) 3 : 5

B) 5 : 3

C) 8 : 7

D) 4: 5

Ans: A) 3 : 5

Sol.

Let efficiency of E is Z unit/day

he works for 12 days

work complete = $12Z$ unit

B and C work for 8 days = $(5 + 4) \times 8$ unit = 72 unit

Remaining work = $180 - 72 = 108$ unit

Efficiency of E = $108/12 = 9$ unit/day

Now,

A and E completed work 'X'

$= 180/15 = 12$ days

D, B and C completed both work 'X' and 'Y'

$= (200+180)/19 = 20$ days

Required Ratio = $12: 20 \Rightarrow 3: 5$

8. A is two years older than B who is twice as old as C. If the total of the ages of A, B and C be 27, then how old is B?

A)7

B)8

C)9

D)10

Answer: D)

Sol:

Let C's age be x years. Then, B's age = $2x$ years. A's age = $(2x + 2)$ years.

$$(2x + 2) + 2x + x = 27$$

$$5x = 25$$

$$x = 5.$$

Hence, B's age = $2x = 10$ years.

9. Mr. Hamilton invested an amount of Rs. 13,900 divided in two different schemes A and B at the simple interest rate of 14% p.a. and 11% p.a. respectively. If the total amount of simple interest earned in 2 years be Rs. 3508, what was the amount invested in Scheme B?

A) Rs. 6400

B) Rs. 6500

C) Rs. 7200

D) Rs. 7500

Ans: Rs. 6400

Sol: Let the sum invested in scheme A be Rs. x and that in scheme B be Rs. $(13900 - x)$

$$\text{Then, } [x \times 14 \times 2 / 100] + [(13900 - x) \times 11 \times 2 / 100] = 3508$$

$$28x - 22x = 350800 - (13900 \times 22)$$

$$6x = 45000$$

$$x = 7500$$

So, sum invested in Scheme B = Rs. $(13900 - 7500) = \text{Rs. } 6400$

10. A train, 800 metre long is running with a speed of 78 km/hr. It crosses a tunnel in 1 minute. What is the length of the tunnel (in metres)?

A) 440 metre

B) 500 metre

C) 260 metre

D) 430 metre

Ans: B

Sol: Distance travelled in 1 minute

$$= 1 \times 60 \times 78 \times 5 / 18 = 1300 \text{ metre}$$

Length of the tunnel

$$= (1300 - 800) = 500 \text{ metre.}$$